Title: EXTERNAL DISCRIMINATION BETWEEN PACE PULSES AT DIFFERENT HEART LOCATIONS

REMARKS

This responds to the Office Action dated March 16, 2006. No claims are amended, cancelled, or added. As a result, claims 1-21 remain pending in this patent application.

Objection to the Drawings

The drawings were objected to as failing to comply with 37 C.F.R. 1.84(p)(4), on the grounds that reference character "300" was used to represent multiple items in the drawings. Applicant has amended the drawings to formalize the drawings and to overcome this objection. The depolarization detector circuit on Figure 4, which was previously labelled with the reference number 300, has been given a unique reference number of 214. Applicant has amended the specification to conform to the amendments to the drawings. Accordingly, Applicant respectfully requests withdrawal of this objection.

§102 Rejection of the Claims

Claims 1-13 and 15-20 were rejected under 35 U.S.C. § 102(b) as being anticipated Gauglitz (U.S. Patent No. 5,231,990). Applicant respectfully traverses.

Concerning claims 1-13:

Applicant cannot find in the cited portions of Gauglitz any disclosure of assigning a first location assignment to the first pace pulse and a second location assignment to the second pace pulse using at least in part the polarity information about the first and second pace pulses, as similarly recited or incorporated in claims 1-7. Accordingly, because all elements of the present claims apparently cannot be found in the cited portions of Gauglitz, Applicant respectfully requests withdrawal of this basis of rejection of these claims.

For brevity, Applicant defers remarks concerning the separately recited language of the dependent claims, which are believed separately patentable, but reserves the right to present such remarks at a later date.

Concerning claims 15-20:

Applicant cannot find in the cited portions of Gauglitz any disclosure of classifying the pace pulses into distinct classes using at least one of the amplitude, the pulsewidth, the polarity, and the time difference, and to compute location assignments for the distinct classes at least in

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part using the detected heart depolarizations associated with the pace pulses, as similarly recited or incorporated in these claims. Instead, Gauglitz apparently merely uses a timer to determine the "type" of pacer pulse (i.e., bioimpedance vs. cardiac stimulation). (See Gauglitz at col. 16, lines 1-14.) Applicant cannot find anything in Gauglitz that infers "location" of pace pulses. Accordingly, because all elements of the present claims apparently cannot be found in the cited portions of Gauglitz, Applicant respectfully requests withdrawal of this basis of rejection of these claims.

For brevity, Applicant defers remarks concerning the separately recited language of the dependent claims, which are believed separately patentable, but reserves the right to present such remarks at a later date.

§103 Rejection of the Claims

Claims 14 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gauglitz (U.S. Patent No. 5,231,990) in view of Johnson and Swartz (A Simplified Approach to Electrocardiography, 1986, Chapters 3 and 5). Applicant respectfully traverses.

Applicant respectfully submits that no prima facie case of obviousness exists because all elements incorporated in claims 14 and 21 are not disclosed, taught, or suggested in the cited portions of Gauglitz and/or Johnson and Swartz for the reasons discussed above with respect to the § 102 rejection of their base claims. Although Johnson and Swartz apparently refer to determining the axis of an intrinsic ECG signal, like Gauglitz, Johnson and Swartz apparently fails to disclose determining or displaying locations of pace pulses. By contrast, the present patent application describes determining the location of pace pulses, such that the display strip can be conveniently annotated for a physician. This makes such diagnostic information easier to read, and less prone to error in interpretation. Because all elements incorporated in claims 14 and 21 are not disclosed, taught, or suggested in the cited portions of Gauglitz and/or Johnson and Swartz, Applicant respectfully submits that no prima facie case of obviousness exists with respect to claims 14 and 21. Accordingly, Applicant respectfully requests withdrawal of this basis of rejection of these claims.

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CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6951 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The <u>undersigned hereby certifies that this correspondence</u> is being filed using the USPTO's electronic filips_system EFS-Web, and is addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 2313-1450, not is 10 day of April 2006.

Name

Signature